

I. ABBREVIATIONS

ADO	AUTOMATIC DOOR OPENER
AF	AMPERE FRAME
AFT	ABOVE FINISHED FLOOR
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
BC	BARE COOPER
C	CONDUIT
CB, C/B	CIRCUIT BREAKER
CKT	CIRCUIT
CKT BKR	CIRCUIT BREAKER
CCTV	CLOSET CIRCUIT T.V.
CLG	CEILING
DB	DIRECT BURIAL
EC	EMPTY CONDUIT
EG	EQUIPMENT GROUND
EX	EXISTING
EJ	EXPANSION JOINT
EXP, XP	EXPLOSION, PROOF
EMRG	EMERGENCY
ELEC	ELECTRIC
EW	ELECTRIC WATER COOLER
ESM	ELECTRIC STRIP MOLD
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FL	FILM ILLUMINATOR
FCU	FAN COIL UNIT
FIXT	FIXTURE
FLUOR	FLUORESCENT
FSS	FUSED SAFETY SWITCH
FSCP	FLAME SAFEGUARD CONTROL PANEL
G	GROUND
G, GND	GENERATOR
GEN	GENERATOR TRANSFER DEVICE
GTD	GROUND TERMINAL BOX
CTB	GROUND FAULT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
HOA	HAND OFF AUTOMATIC
HP	HORSE POWER
HV	HIGH VOLTAGE
INCAND	INCANDESCENT
JB	JUNCTION BOX
LTOP	LOCAL TEMPERATURE CONTROL PANEL
LTS	LIGHTS
LTO	LOW VOLTAGE
LV	LOW VOLTAGE
LV	MASTER ANTENNA TELEVISION
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUGS ONLY
MTD	MOUNTING HEIGHT
MTG HGT	MOUNTING HEIGHT
NFSS	NON-FUSED SAFETY SWITCH
P	POLE
PB	PULL BOX
PBPU	PREFABRICATED BEDSIDE
PNL	PANEL
POD	POWER OPERATED DAMPER
PTRV	POWER TYPE ROOF VENTILATION
PWR	POWER
RECEPT	RECEPTACLE
RGIP	REMOTE GROUND INDICATOR PANEL
SIG	SIGNAL
SS	SAFETY SWITCH
STA	STATION
TEL	TELEPHONE
TV	TELEVISION
UH	UNIT HEATER
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLTAGE
VP	VAPOR PROOF
W	WIRE
W/	WITH
WP	WEATHER PROOF
WT	WATER TIGHT
TRMR	TRANSFORMER

II. SYMBOLS

II.1. ELECTRICAL SYMBOLS

II.1.A. ELECTRICAL POWER SYMBOLS

II.1.A.a. SYMBOLS - GENERAL

CLG	WALL	DESCRIPTION
		JB, MTG HGT 1'-6" A.F.F. TO CENTERLINE OF BOX U.O.N.
		JUNCTION BOX-CRITICAL POWER
		JUNCTION BOX-NORMAL POWER
BRANCH CKT CONCEALED IN CLG OR WALL.		
No. of CKTS. IN CONDUIT PHASE CONDUCTORS		
	FUSED OR UNFUSED DISCONNECT SWITCH	
	MOTOR	
	HEAT TRACE CONTROLLER	

II.1.A.b. SYMBOLS - RECEPTACLES

	DUPLEX RECEPT (HOSPITAL GRADE), 20A, 120V.. WALL MTD, MTD HGT 18" AFF U.O.N.
	DUPLEX RECEPT (HOSPITAL GRADE) - 20A, 120V. WALL MTD, 18" ABOVE COUNTER TOP/SINK. SUBSCRIPT "GT" INDICATES GND FAULT TYPE.
	DUPLEX RECEPT (HOSPITAL GRADE) - 20A, 120V. WALL MTD, 18" ABOVE COUNTER TOP/SINK. SUBSCRIPT "ST" INDICATES SAFETY TYPE.
	QUDRAPLEX RECEPT (HOSPITAL GRADE), 20A, 120V.. WALL MTD, MTD HGT 18" AFF U.O.N.
	SINGLE RECEPT. SPECIAL PURPOSE RECEPT. TYPE AS NOTED.
	QUADRAPLEX RECEPTACLE ON EMERGENCY CIRCUIT - 20A, 120V, MTD 18" [460mm] AFF U.O.N. WITH 1/4" [6.5mm] "EMERGENCY" ENGRAVED LETTERS FILLED WITH RED ENAMEL. SUBSCRIPT "P" INDICATES RECEPTACLE WITH INTERNAL NEON LIGHT.
	DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT - 20A, MTD 18" [460mm] AFF U.O.N. WITH 1/4" [6.5mm] "EMERGENCY" ENGRAVED LETTERS FILLED WITH RED ENAMEL. SUBSCRIPT "P" INDICATES RECEPTACLE WITH INTERNAL NEON LIGHT.
	ELECTRICAL STRIP MOLD (OUTLETS ON 4"-0" (610 MM) CENTERS OR AS DESIGNATED ON DRAWINGS), MTD 3'-6" (1100 MM) AFF OR AS INDICATED.

	COUNTER TOP MTD DEVICE, (6" ABOVE COUNTERS WITHOUT A BACKSPLASH, 8" ABOVE A COUNTER W/ BACKSPLASH), COORDINATE MTG HGT W/ ARCHITECTURAL PLANS.
	TV RECEPT, INSTALL W/ CATV CONNECTION UNDER SINGLE PLATE. REFER TO ARCHITECTURAL PLANS FOR MTD HGT.

II.1.A.c. SYMBOLS - PANELBOARD

	PANELBOARD - NORMAL POWER
	FUTURE PANELBOARD - (SPACE PROVISION ONLY)
	PANELBOARD - EMERGENCY LIFE SAFETY POWER
	PANELBOARD - EMERGENCY CRITICAL POWER
	PANELBOARD - EMERGENCY EQUIPMENT POWER
PWR OR LIGHTING PNL, VOLTAGE AS INDICATED IN DRAWING.	

II.1.B. ELECTRICAL LIGHTING SYMBOLS

II.1.B.a. SYMBOLS - LIGHTING LUMINARE FIXTURES

NOTE:  
LIGHTING CONTROLS: UPPER CASE LETTER ADJACENT TO FIXT DENOTES FIXT TYPE LOWER CASE LETTER INDICATES CONTROLLING SWITCH REFER TO LIGHTING FIXT SCHEDULE FOR FIXT INFORMATION.

	2'x4" FLUOR FIXT - SURFACE OR RECESSED MTD.
	1/2'x 4" FLUOR FIXT WALL SURFACE MTD.
	1/2'x 3" FLUOR FIXT WALL SURFACE MTD.
	1/2'x2" FLUOR FIXT WALL SURFACE MTD.
	FLUOR FIXT(S) SIMILAR TO ABOVE MENTIONED TYPES SYMBOLS, BUT WIRED TO CRITICAL SYSTEM SYSTEM.
	FLUOR FIXT(S) SIMILAR TO ABOVE MENTIONED TYPES SYMBOLS, BUT WIRED TO LIFE SAFETY SYSTEM.

II.1.B.b. SYMBOLS - SWITCHES FIXTURES

WALL	NOTE	DESCRIPTION
	NORMALLY MTG HGT FOR THE FOLLOWING SWITCHES SHALL BE 40" AFF, U.O.N. IN ELECTRICAL CLOSET, MECHANICAL ROOMS, MTD SHALL BE 54" A.F.F.	
	SINGLE P SWITCH W/ SUFFIX A.B.C. ETC. INDICATES CONTROL OF FIXT(S) WITH SAME DESIGNATION(S).	
	THREE WAY SWITCH	
	OCCUPANCY SENSOR SWITCH W/ INFRA RED DETECTOR	
	CLG MTD OCCUPANCY SENSOR	
	NURSE CALL HANDSET	

II.2. LOW VOLTAGE SYMBOLS

II.2.A. SYMBOLS - FIRE ALARM SYSTEM

	FA ENUNCIATOR AUDIO-VISUAL DEVICE, WALL MTD. MTG HGT: 78" A.F.F.
	FA ENUNCIATOR (VISUAL ONLY) - WALL MTD. MTG HGT: 78" A.F.F.
	FA SMOKE DETECTOR, CLG MTD.
	FA MANUAL PULL STA. MTG HGT 48" A.F.F.
DOOR HOLDERS	

II.2.B. - EXIT SIGNS SYMBOLS

	CLG OR WALL MOUNTED DIRECTIONAL ARROWS AS INDICATED
	SINGLE FACE
	DOUBLE FACE

II.2.C. SYMBOLS - NURSE CALL SYSTEM

	NURSE CALL MASTER STATION MTD ON NURSE'S COUNTER TOP U.O.N.
	NURSE'S CALL BEDSIDE STATION
	NURSE'S CALL CODE BLUE STATION
	NURSE CALL MASTER DUTY STATION MTD 5'-0" AFF
	NURSE CALL TOILET STATION - MTG 3'-0" AFF
	NURSE CALL TERMINAL CABINET
	NURSE CALL AUXILIARY INTERSECTIONAL DOME LIGHT.
	NURSE CALL CORRIDOR DOME LIGHT (X INDICATES NUMBER OF LAMPS)

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II.2.D. SYMBOLS - TELEPHONE - DATA SYSTEM

	COMBINATION DATA/TELEPHONE OUTLET (WALL MTD,TYPE), W/ BACK BOX AND EC STUBBED UP TO 4" ABOVE FINISHED CLG, INCLUDING DRAG LINE. MTG HGT 18" A.F.F. -U.O.N.
	DATA OUTLET (WALL MTD.), W/ BACK BOX AND EC STUBBED UP TO 4" ABOVE FINISHED CLG, INCLUDING DRAG LINE. MTG HGT 18" A.F.F. -U.O.N. X EQUALS QUANTITY OF JACKS.
	DATA JUNCTION BOX. X EQUALS CABLE QUANTITY.
	TEL TERMINAL CABINET.
	WIRELESS ACCESS DEVICE

II.2.E. SYMBOLS - TELEVISION SYSTEM

	TELEVISION RECEPTACLE, INSTALL WITH CATV CONNECTION UNDER SINGLE PLATE. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.
	CABLE TELEVISION SPLITTER ('X' INDICATES NUMBER OF CHANNELS)

II.2.F. SYMBOLS - PUBLIC ADDRESS SYSTEM

	CLG MTD SPEAKER. NEW SPEAKERS SHALL MATCH EX
	HORN SPEAKER WALL MTD 12'-0" AFF
	AUDIO AMPLIFIER

II.2.G. SYMBOLS - SECURITY SYSTEM

	CARD READER MTD 4"-8" AFF
	DOOR CONTACT
	ELECTRIC STRIKE
	KEYPAD MTD 4"-8" AFF
	REQUEST TO EXIT
	SECURITY CONTROL PANEL
	SECURITY MANAGEMENT SYSTEM

III. GENERAL NOTES:

III.1. ELECTRICAL GENERAL NOTES:

- ALL LOCATIONS OF ELECTRICAL LIGHTING FIXTURES SHALL BE PLACED BY VERIFYING ARCHITECTURAL PLANS.
- CONTRACTOR SHALL PERFORM ELECTRICAL WORK IN ACCORDANCE W/THE LATEST EDITION OF THE NEC.
- CONSOLIDATION OF INDIVIDUAL CONDUIT HOMERUNS SHOWN ON THE DRAWINGS SHALL NOT BE PERMITTED PRIOR WRITTEN APPROVAL. LIGHTING AND RECEPTACLES CIRCUITS ONLY MAY BE EXEMPTED, BUT THAT LIMITED TO NO MORE THAN THREE CKTS PER CONDUIT HOMERUN. HOWEVER, MODULAR WIRING SHALL BE PERMITTED.
- U.O.N. ALL MTG ELEVATIONS ARE AFF TO CENTER LINE OF FIXTURE.
- ALL CKT(S) SHALL INCLUDE AN INSULATED GREEN GND WIRE. ALL WIRING IN FINISHED SPACES SHALL BE CONCEALED.
- PROVIDE GROUNDING TYPE EXPANSION FITTINGS OR OTHER APPROVED METHODS TO ALLOW FOR EXPANSION, CONTRACTION, & DEFLECTION WHERE CONDUIT(S) CROSS EXPANSION JOINTS.
- EXTREME CAUTION MUST BE EXERCISED WHEN WORKING ON ANY OF THE ELECTRICAL PWR SYSTEMS. AS THIS IS A FULLY OPERATIONAL BUILDING AND ANY UNAUTHORIZED ELECTRICAL OUTAGE MAY CAUSE ACCIDENTS OR LOSS OF LIVES.
- NO UNSCHEDULED INTERRUPTIONS WILL BE TOLERATED. ALL WORK REQUIRING TEMPORARY OR PARTIAL OUTAGES MUST BE SCHEDULE AS SPECIFIED.
- CONSTRUCTION WORK THAT WILL CREATE EXCESSIVE NOISE AND VIBRATION MUST BE SCHEDULE AS SPECIFIED.
- REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL APPLICABLE INFORMATION.
- REFER TO ALL CONTRACT DOCUMENT WORK FOR POSSIBLE INTERFERENCE, BEFORE BID IS MADE. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF HIS FAILURE TO HAVE MADE SUCH EXAMINATIONS OR ANY ERROR ON HIS PART.
- BALANCE THE LOADS ON ALL DISTRIBUTION SYSTEMS, AND ALL POWER EQUIPMENT SO THAT THE VARIATION IN AMPERES PER PHASE READINGS SHALL NOT EXCEED 5% UNDER NORMAL OPERATING CONDITIONS. SPECIAL CARE SHALL BE TAKEN DURING BALANCING TO PREVENT RESERVE ROTATION OF MOTORS.
- VERIFY ALL EX CONDITIONS PRIOR TO COMMENCING WORK & NOTIFY THE CONTRACTING OFFICER IF A CONDITION PREVENTS THE INTENT OF THESE PLANS.
- MAINTAIN THE CONTINUITY OF ALL CONDUIT(S) WHICH ARE NOT INTENDED TO BE RENDERED INOPERATIVE.
- CONDUIT NUMBERS SHOWN ON HOMERUNS TO PANELBOARD ON THESE PLANS ARE FOR DESIGN PURPOSES ONLY. COORDINATE THE EXACT POLE POSITIONS FOR ALL HOMERUNS DURING THE COURSE OF WORK. LABEL ALL CB IN ALL PANELBOARDS AS TO DEVICES CONTROLLED.
- ALL EMPTY CONDUIT(S) SHALL BE FURNISHED WITH PULL-WIRE AND WILL BE STUBBED-UP AFF OR ABOVE SUSPENDED CLG AS THE CASE MAY BE, AND SHALL BE CAPPED AT BOTH ENDS
- ALL CONDUCTORS AND CABLES SHALL BE COPPER WIRES RATED FOR 75 C
- ALL THE ELECTRICAL CONDUITS SHALL BE MINIMUM 3/4".
- CONTRACTOR SHALL INSTALL HANG WIRE AT OR CLOSE AS POSSIBLE TO THE FOUR CORNERS OF THE FIXTURE ON THE GRID MAINS IN CONJUNCTION WITH THE FIXTURE LOCKING CLIPS.

II.2 LOW VOLTAGE GENERAL NOTES:

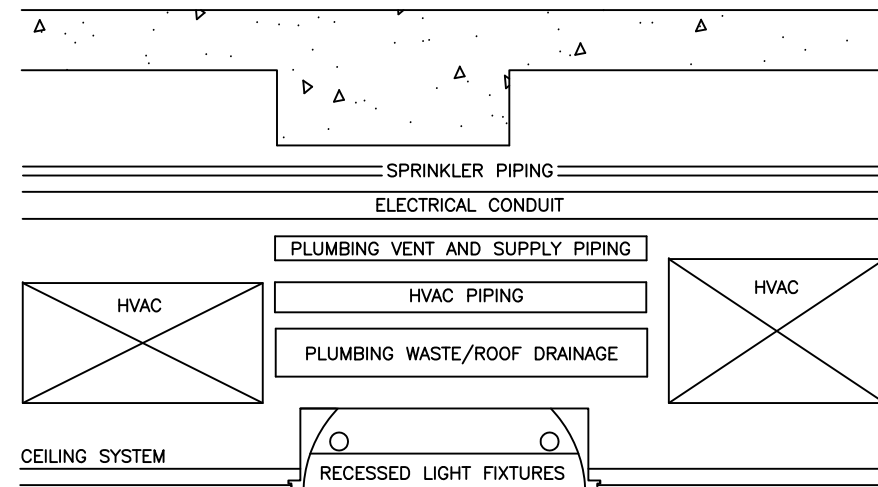
- GLV1. ALL LOCATIONS OF LOW VOLTAGE FIXTURES SHALL BE PLACES BY VERIFIED PLANS.
- GLV2. FOR MOUNTING HEIGHTS OF LOW VOLTAGE FIXTURES REFERS TO ARCHITECTURAL ELEVATIONS SHEETS AND FIXT(S) SPECIFICATIONS.

II.2.H. SYMBOLS-MISCELLANEOUS

	ENTRY/EXIT BUTTON
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II.3 DEMOLITION SYMBOLS

	2' X 4' FLUOR FIXT - SURFACE OR RECESSED
	1/2' X 4' FLUOR FIXT - SURFACE OR RECESSED
	2' X 2' FLUOR FIXT - SURFACE OR RECESSED
	RECEPTACLE
	SINGLE POLE SWITCH



FULLY SPRINKLERED FOR CONSTRUCTION

KEY PLAN:		STAMP:		CONSULTANTS:		ARCHITECT/ENGINEERS:		Drawing Title ELECTRICAL COVER SHEET		Project Title RENOVATE INPATIENT MEDICAL/SURGICAL WARD 7E		Project Number R636A8-10-001 Building Number 1		Office of Construction and Facilities Management Department of Veterans Affairs	
[Key Plan Diagram]		[Stamp]		NIKA Technologies, Inc. Engineering and Management Consultants 11400 Rockville Pike, Ste 505 N. Bethesda, MD 20852 p: 301.770.3520 f: 301.770.3521 www.nikatechnologies.com		11000 West Park Place • Milwaukee WI 53224 • Tel 414 359-3080 • Fax 414 359-3070 Intelligent Designs Inspired Results www.prarch.com		Approved: Project Director		Location Iowa City VA Medical Center		Drawing Number 1-E1 Dwg. 22 of 44			
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